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MEMBRANA VIRGINATATIS,

BY

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So termed by the Latins, by the Ancient Greeks, *ερυγή*, a pellicle, among the Germans given the various names, Scheidenklappe, Jungfernhäutschen, Jungfernschlölein, Jungfernschatz, with us called Hymen after the son of Apollo, and Urinia the God of Marriage and Nuptial solemnities, is a simple fold of the mucous membrane found situated at the outer orifice of the vagina in the normal condition of the human female, frequent also in the higher order of apes, the ruminants and carnivora. It is usually semilunar, circular or parabolic in form.

The following varieties are to be seen in the anatomical museum at Heidelberg:

- I. The Hymen Semilunaris. The normal Hymen.
- II. The Hymen Circularis, with small central opening.
- III. The Hymen Cibriformis, sieve-like, containing many holes, like a water pot.
- IV. The Hymen fibrinatus, similar to the fringe-like appendages of the ostrium abdominale of the tubæ fallopianæ. This form is the most important in a forensic point of view, as it may be taken for the normal Hymen which has been torn.
- V. The Hymen imperforatus. This on account of the retensio mensium dependent on it, is a cause for surgical treatment. It may also prevent copulation.

In rare instances the opening of the Hymen is found divided into two parts by a perpendicular bridge from the concave border of the Hymen, to the meatus urinarius where it becomes fast.

In the crescentic variety the concave border approaches more or less towards the urethra in such a way as to contract the vagina behind. This variety almost always gives way in coition.

In the circular variety the free border is much thinner than the other, being fringed in many cases, leaving an opening which is sometimes round, again elongated and in general situated somewhat nearer the anterior than the posterior wall of the vagina. There exists in some instances an upper anterior and a lower posterior opening with simply a band lying transversely across the vagina. We have also in rare cases a second Hymen existing above the first.

Atresiæ vaginaliæ membranacea seu externa is the term applied to the Hymen Imperforatus. In this we have a thickened toughened state of the membrane. One should differentiate between atresia interna or complete, which depends either on an incomplete development of the vagina from its entire absence or from a diseased condition of the same from ulcerative processes.

There has been writing *pro* and *con* concerning the position of the Hymen in the negress as compared with its position in the white female. It has been claimed that it is situated from $\frac{1}{2}$ to 2 inches up the vagina instead of over its orifice. Dr. Turnipseed, of

South Carolina, in an article in the *American Journal of Obstetrics* maintains that the Hymen in the negro race is found not over but above the vaginal entrance. He reports the examination of eleven cases from 9 to 12 years of age, where the Hymen is $1\frac{1}{2}$ to 2 inches up. This he claimed as "one of the anatomical relations Providence has given us to show the non unity of the races."

This is denied by Dr. Hyatt, of North Carolina. He has examined 1,000 negresses and has found no differences from the whites in this membrane.

In 6 cases reported by Dr. Fort he claims to have found the Membrana Virginatatis 1 to 2 inches above the vulvæ. In several cases the Hymen was very dense.

Hyatt reports two cases of the congenital absence of the Hymen. This is a rare anomaly, but forensic physicians are well aware of the possibility.

Casper found in children a Hymen shaped like a keg, generally 1 to $1\frac{1}{2}$ lines broad. This formation often becomes permanent in the case of idiot girls. A cuff-like Hymen is also found in this class. This is found to be more fleshy than membranous.

Four or five lips placed like tiles on a roof are sometimes found on each side. These are endowed with varied powers of resistance. The openings were large enough to admit a finger. These openings were not always found to be round or oval but bridged over with a band or lattice work. He adds another form where numerous lips overlap each other with a heart shaped opening. In other cases of lip formation he notices what seem to be reduplications of the labiæ minoræ.

These anomalies of the Hymen do not affect the other parts of the female genitalia, they remaining perfect in every particular.

Scanzoni speaking of the Hymen in embryo says: "The Hymen, as is known, is completely absent. In the new born child it forms but a minute fold of the mucous membrane, which is insensibly elevated until the age of puberty."

This latter fold of the mucous membrane simply marks the place where the Hymen will be when the sexual organs develop.

Dr. Dohn says that the Hymen does not appear until the nine-

teenth week and is not visible at the sixteenth week. It develops on the lowest segment of the urogenital sinuses, at the middle of the embryonic period, the inner surface of the urogenital tube shows considerable excess of tissue. This shows itself in the curve of the vagina, elongation of the posterior wall, the growth of the papillæ and rugæ. Further on, this hyperplasia extends to the tissue of the external covering and leads to the formation of an apron-like fold which gradually grows in breadth. In accordance with its proliferation the posterior vaginal wall plays prominent part in the formation of this fold.

Von Hoffman, of Wiesbaden, formulated his conclusions of observations on embryos as follows:

I. The Hymen should not be considered as a growth springing independently from the genital tube, but is an accessory product to the formation of the vagina, the lower portion of which touches the lower or dorsal surface of the allantois, gradually verges into the urogenital sinuses and then forms the floor of the vestibule which is chiefly represented by the Hymen.

II. Every Hymen in his opinion originally possessed a double perforation, and probably the two openings are the former outlets of the wolfian ducts in the urogenital sinus.

M. Pozzi has formulated a new hypothesis concerning the development of the Hymen. He bases his hypothesis on one case, a woman, who had no internal organs of generation and yet a Hymen. The presence of the Hymen and the absence of the vagina led Pozzi to believe in the independence of the Hymen as an organ. He does not prove, however, that his patient had a true Hymen, he does not prove that it was not a pathological band.

The Hymen is attached to the inferior and lateral borders of the orificium vaginæ, and is semilunar in shape, its convex border below and posteriorly looking towards the perineum, its concave border above or anteriorly looking to the urethra. It comprises a mucous fold containing between its lamellæ a layer of cellular tissue enclosing numerous elastic fibres and some muscular bundles of organic life, some blood-vessels ramify in it. The epithelium is laminated tesselated and about the thickness of that cover-

ing the vestibule 0.3—0.5. M. The mucous membrane is delicate and highly vascular. It bristles with close set conical, divided and undivided papillæ that projects into the epithelium. They are 0.2—0.3. M. long.

In an examination of the Hymen, to see it plainly, the thighs must be abducted, and the labiæ minoræ must be pulled downwards as well as apart, thus pulling the frænulum labiorum out of the way. In moderate abduction the shape is that of a half moon. Increased abduction destroys this shape. Rupture of the Hymen occurs in the vast majority of cases on the first approach of the male (defloratio). Some Hymens are so tough as to keep out the male organ from the vagina. Unless there is surgical interference, inter-course in these cases must remain vulvar.

There are cases recorded where this vulvar intercourse was carried on for years, the female finally becoming pregnant and arriving at term with the Hymen unruptured. A specimen is on exhibition in the museum at Halle, where the mother had given birth to a seven months foetus, the Hymen still remaining perfect.

The rupture of the Hymen may occur in various other ways than through sexual intercourse—onanism, a fall with the feet widely separated, riding horse-back after the manner of men, ulcerative diseases, flooding, the passage of a tumor from within or the examining finger from without. A case is reported by Hyrtle where a young woman was sawing wood. She was thrown upon the saw by a passing wagon and the handle driven into the vagina, rupturing the Hymen. Apropos, not long since I was sitting in my front office by the half open door reading, when quickly an honest, anxious, unsophisticated seeker after truth, evidently just married, stepped in and was seated besides me before I had time to look up. "Doctor," said he, "can a woman loose her 'virgin' any other way than by being with a man?" I replied: Yes, she may lose it by flooding, the passage of an instrument, the finger, or violent or sudden exercise. He continued: "Ought a woman, if she is all right, 21 years old, of full size, to complain of pain and it hurting her when a man goes

to her the first time?" I replied: She ought, and in some cases this pain lasts for sometime; in one case, I gave chloroform to a newly married woman whose husband had been unable to have satisfactory intercourse with her during the two weeks they had been married, every attempt giving the wife the most exquisite pain. The connection was perfected and when recovering from the chloroform, yet semi-unconscious she begged him to repeat the act, which before she had resisted with terror. I repeated the chloroform in a few days, subsequent to which all went smoothly."

The young man said: "I just wanted to know," handed me a fee, bade me good day, and left as suddenly as he came.

Concerning the function of the Hymen, it seems to have been relegated as a *signum anatomicum* of innocence and virtue. In this role, however, it has of recent times lost much of its prestige. Hyrtle gets off the following "Irishism" viz.: "who has it not can never obtain it." In all times, in all ages, and among all races, civilized and uncivilized, the Hymen has been held as a sign of the virtue and morality of the holder. The old Jews proudly carried the shirt of the newly married about among the relatives and friends, showing the traces of blood. Such a custom is still in vogue in Naples. The Ehrenhemde of the Germans, the Camisca del Onore of the Italians, the shirt of honor. The Mohammedans held the flow of blood as a criterion of previous virtue when the flow occurred *in primis nuptiis*. The ancient Egyptians cut the Hymen through to have it out of the way.

Alhanasius says that the Phoenicians turned the bride over to a favorite slave to have her relieved of her virginity. Under the Emperor Tiberius a law was promulgated that no virgin should be hanged. She was first to be relieved of her virginity by the hangman.

A Roman Satyr who wrote of the sexual sins of his age (probably also his own) had a little maiden say, "*Juonem meam iratam habeam, si unquam memiserem me virginem fuisse.*" The Hymen being a hindrance to sexual intercourse, the weak-backed and demoralized people of ancient times had the rupture made by priests or little ivory idols. Shakespeare says of the Hymen:

"The longer kept the less worth." Among the Greeks the long possession of the Hymen meant its possessor to be extremely ugly. Their old maids they called furies. The following were the words of the holy Hieronymus: "*Dificiles res virginitas idioque rara.*"

To some, aspiring to be husbands, among the Asiatic tribes, *Virgo intacta* has no charms. They prefer a widow to a virgin. They simply consider the matter as "strictly business." The widow, they think, has no mechanical hindrance to coition, and knows more of the duties of the wife and housekeeper. He who has a supply of widows as daughters can realize twice as largely on them for their second marriage as he did for their first. One of their number handed his name down in history by giving one of his widowed daughters to his friend for a wife at the same price a virgin would bring.

The following, in regard to the Hymen or Virginity, is gleaned from the scriptures. Speaking of the marriage of the high-priest:

Lev. xxi. 13: And he shall take a wife in her virginity.

14. A widow, or a divorced woman, or profane, or a harlot, these shall he not take: but he shall take a virgin of his own people to wife.

And further:

Deut. xxii. 13: If any man take a wife, and go in unto her, and hate her,

14. And give occasions of speech against her, and bring up an evil name upon her, and say, I took this woman, and when I came to her, I found her not a maid:

15. Then shall the father of the damsel, and her mother, take and bring forth the tokens of the damsel's virginity unto the elders of the city in the gate:

16. And the damsel's father shall say unto the elders, I gave my daughter unto this man to wife, and he hateth her;

17. And, lo, he hath given occasions of speech against her, saying, I found not thy daughter a maid; and yet these are the tokens of my daughter's virginity. And they shall spread the cloth before the elders of the city.

18. And the elders of that city shall take that man and chas-
tise him ;

19. And they shall amerce him in a hundred shekels of silver,
and give them unto the father of the damsel, because he hath
brought up an evil name upon a virgin of Israel : and she
shall be his wife ; he may not put her away all his days.

20. But if this thing be true, and the tokens of virginity be
not found for damsel :

21. Then they shall bring out the damsel to the door of her
father's house, and the men of her city shall stone her with stones
that she die.

And still further :

23. If a damsel that is a virgin be betrothed unto a husband,
and a man find her in the city, and lie with her ;

24. Then ye shall bring them both out unto the gate of that
city, and ye shall stone them with stones that they die ; the dam-
sel, because she cried not, being in the city ; and the man, be-
cause he hath humbled his neighbor's wife : so thou shalt put
away evil from among you.

25. But if a man find a betrothed damsel in the field, and the
man force her, and lie with her ; then the man only that lay with
her shall die :

26. But unto the damsel thou shalt do nothing ; there is in the
damsel no sin worthy of death : for as when a man riseth against
his neighbor, and slayeth him, even so is this matter :

27. For he found her in the field, and the betrothed damsel
cried, and there was none to save her.

28. If a man find a damsel that is a virgin, which is not be-
trophed, and lay hold on her, and lie with her, and they be found ;

29. Then the man that lay with her shall give unto the dam-
sel's father fifty shekels of silver, and she shall be his wife ; be-
cause he hath humbled her, he may not put her away all his days.

In all times the taking of the Hymen unlawfully has been
visited with severe punishment. Among the Jews, if the girl
was engaged, among the Athenians, Romans, and old French and
English, and in many of the United States, in their earlier times,
the offense was punishable with death. In New York, by the

law of 1787, rape of a child under ten years of age was punishable with death. In 1810 it was changed to imprisonment for life. Also, in Illinois and Massachusetts, the punishment was death. In Texas it is still a capital punishment. Only last April a man was hanged, not lynched, in Gainesville, Texas, for rape.

Among the old Welsh he who robbed a maiden of her Hymen, there being two witnesses to the same, was required to present to his sovereign a piece of silver as high as the sovereign's mouth and as thick as his little finger. In the Isle of Man, in ye olden times, there existed a very wise custom. The criminal was brought into a public place, and the girl whom he had disgraced was given a sword, a whip, and a ring. His punishment lay entirely in her hands. She could either kill, whip, or marry him.

At the Liverpool assizes, May 19, 1884, a miner was sentenced to twenty years penal servitude for rape of a girl æt fourteen. The latter was admitted to Lock Hospital, March 20th, suffering from primary and secondary syphilis. On the following day the prisoner was arrested, and on examination was found to have an indurated ulcer on the penis, indurated inguinal glands and condylomata ani. He had been suffering for some time, and made the statement that he had had connection with a young girl with the object of being cured of his disease. This superstition prevails largely in Lancashire and elsewhere. Among the peasantry of Switzerland the taking of the Hymen is considered a sure cure for gonorrhœa.

The diagnosis of rupture of the Hymen in its medico-legal aspect, whether the rupture be moral or mechanical, or, as the French say, *Virginité ou pucelage*, allows for a great display of tact on the part of the examining physician. This diagnosis between the moral and mechanical rupture of the Hymen is so difficult as to be almost impossible.

Prolapsus *vaginæ* may make it appear that there is no Hymen present. The tendency of modern writers is, I think, to lay too little stress on the presence or absence of the Hymen. There are, of course, many ways in which the Hymen may be removed other than moral, but instances are rare, they are very rare. One would think, from the opinions expressed by most writers, that

they had been exceedingly unfortunate, and had not found a Hymen, therefore all women were unvirtuous. Like the young man who has spent his substance with harlots, he thinks all women are harlots; or to cover his own sins, pretends that virtue is unknown except in newly-born babes. In some localities, and among some people, this may be true, but in others it is not. The writer well remembers how a clinical teacher in Vienna called a class of practitioners, and with great pride showed the presence of a Hymen in a female twenty-four years of age. It was largely dilated upon, the teacher evidently believing that his hearers had scarcely, if ever, seen such a membrane, and fearful that they, possibly himself, would never again see the like.

Devergie says: "When not found, in 999 cases out of 1,000 defloration has taken place." He regards the restoration of the Hymen as one of the many fables.

Casper says: "I must declare that when a forensic physician finds a Hymen still preserved, even its edges not being torn, and along with it (in young persons), a virgin condition of the breasts and external genitals, he is justified in giving a positive opinion as to the existence of virginity, and *vice versa.*"

"Fresh, rosy lips, bright, beaming eyes, with a free yet modest look," the poetical sign of virginity, has not much credit with scientists. Still less the old Roman sign, the swelling of the neck after matrimony. This made it a part of the marriage ceremony to measure the neck with a thread before and after the first dissipation. They thought if the bride's neck swelled after marriage she had not been accustomed to sexual pleasures; otherwise, the inference was that she had.

The remnants of the Hymen, after it is broken through, are drawn into three little thick fleshy warts. Immediately after the first coition they may be seen as irregular bloody lips, and after a week or so contract themselves into the carunculæ mytriformes (quod figuram habeant Baccarum myiti). In general there are but three, one on the back wall of the vagina, the other two, one on either side. They sometimes resemble so much the comb of a cock that they simulate not a little condylomata. They may be-

come inflamed and hypertrophied, and become a hindrance to coition or parturition, and require removal by the knife.

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